

Summit® WMScanner 12.0

Quick Start Guide



Thank you choosing Summit® WMScanner from Extreme Networks®. Please read the Quick Start Guide installation/upgrade instructions **prior** to installing the software.

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Extreme Networks, Inc.
3585 Monroe Street
Santa Clara, California 95051
(888) 257-3000
(408) 579-2800
<http://www.extremenetworks.com>

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Recommended System Requirements

To effectively use this application, the following computer platform is recommended:

- Intel® Pentium® 4 1.5 GHz or better (or equivalent)
- Microsoft® Windows® XP (Professional, Home Edition and Tablet PC Edition) or Windows Vista
- Microsoft Word® XP (Word 2002) or later (required for generating Reports)
- 1 GB RAM (minimum)
- 500 MB free disk space for installation
- 1024x768 VGA with true color
- Mouse, trackball or compatible pointing device with scroll wheel
- Microsoft Internet Explorer 6.0 or later
- CD-ROM drive

Support for Wireless Measurement via RF Monitoring Mode

In order to enable data collection via RF Monitoring mode, you will need one of the WLAN client cards listed below with Summit WMScanner's custom driver installed. The supported cards are:

- Netgear RangeMax Dual Band Wireless-N USB a/b/g/n Adapter WNDA3100 v1
- Ubiquity SR71 USB a/b/g/n Adapter
- Netgear® ProSafe Dual Band a/b/g Wireless PC Card, Model WAG511 v2
- Ubiquiti Networks SuperRange a/b/g Cardbus
- Cisco® a/b/g Cardbus Adapter, Model AIR-CB21AG-A-K9
- D-Link® RangeBooster N 650 b/g/n Notebook Adapter, Model DWA645
- CACE Technologies AirPcap N a/b/g/n Cardbus
- AirMagnet® C1060 a/b/g/n Cardbus Adapter

Installation on Win XP or Win Vista

Installing Summit WMScanner is much like installing any other Microsoft Windows software. However, Summit WMScanner uses electronic license control, so an extra activation step will be required.

Note: You will need to uninstall any previous versions of Summit WMScanner prior to installing the new Summit WMScanner. As for your user data, they will be backed up to a directory called **UserBackup** in the directory of the new installation of Summit WMScanner (the default location is **C:\Program Files\SummitWMScanner\UserBackup**).

Preparation

It is very important to perform the following preparatory steps to ensure your installation goes smoothly:

- **Administrative Privileges Are Required for Install:** a user with local administrative privileges must install Summit WMScanner. Non-administrative users may use the software once it has been installed.
- **Internet Explorer 6.0 or better** is required to properly run Summit WMScanner.
- **Windows Service Packs:** Your software will work best running with the most recent updates of Windows XP or Windows Vista. These upgrades are available through the Microsoft Windows Update web site.

Installation procedure

To install Summit WMScanner, please follow these steps in the order presented:

1. Close any programs running within Windows before starting the installation process.
2. Log on as 'Administrator' or as a user with administrative or power user privileges.
3. Double-click the Summit WMScanner installation executable and choose a location for storing the temporary installation files. These files can be removed at a later date or kept for product repairs or reinstallations.
4. Read the warnings and the license agreement. You must accept the license agreement to continue.
5. To choose the destination folder where the program files will be stored on the hard drive, click the Configure button next to the product selection. We recommend you accept the default folder name. If you choose a hard drive other than the default C: drive, be sure to also type in a directory name; e.g. click on your D: drive and then type in \Program Files\SummitWMScanner\.
6. Click Next to begin the installation process.
7. When setup is complete, you are ready to run the software by going to the Windows Start Menu and selecting Programs > Summit WMScanner> Summit WMScanner.

WLAN Card Hardware Removal Procedure

IMPORTANT NOTE: You should only remove your WLAN card adapter from your computer using the following hardware removal process. Failure to follow this process could cause your computer to crash and loss of data.

Step 1: First, close down or ensure that Summit WMScanner is not running

Step 2: Double click the Safe Hardware Removal icon in your system tray: 

Step 3: Select your Wireless LAN Adapter from the Safely Remove Hardware dialog and choose Stop

Step 4: Again select your adapter and select Ok to confirm you wish to remove the hardware (Note, this will not uninstall the driver. This process simply allows you to safely unplug the adapter from your computer)

Step 5: You may now remove the WLAN Adapter from your computer.

Custom Driver Installation for the WLAN Client Card

In order to enable data collection via RF Monitoring mode, you will need one of the WLAN client cards listed in the recommended system requirements with Summit WMScanner's custom driver installed.

IMPORANT NOTE: Do not install the card manufacturer's driver. The installation of the custom WLAN driver may not work correctly if the manufacturer's driver has been previously installed on your computer. If the manufacturer's driver or other suitable driver has been previously installed on your computer, please uninstall the client card before proceeding.

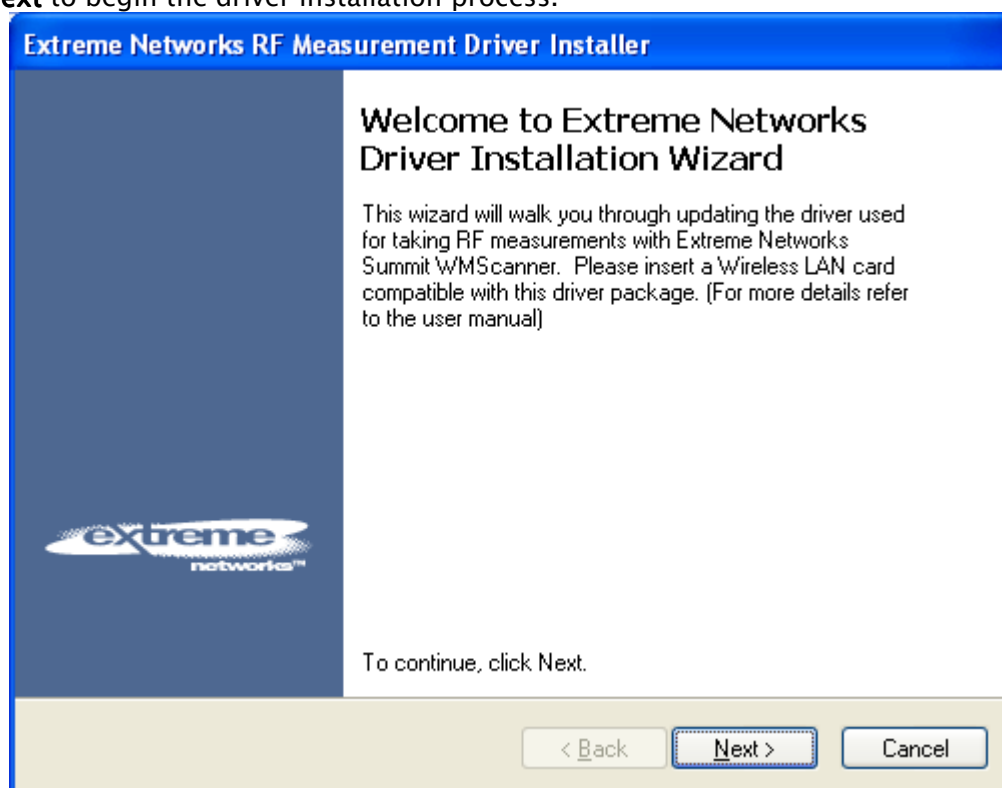
Step 1: Insert the network adapter into your computer's PCMCIA slot or USB port.

Step 2: If the **Hardware Update Wizard** dialog window appears, choose **Cancel**.

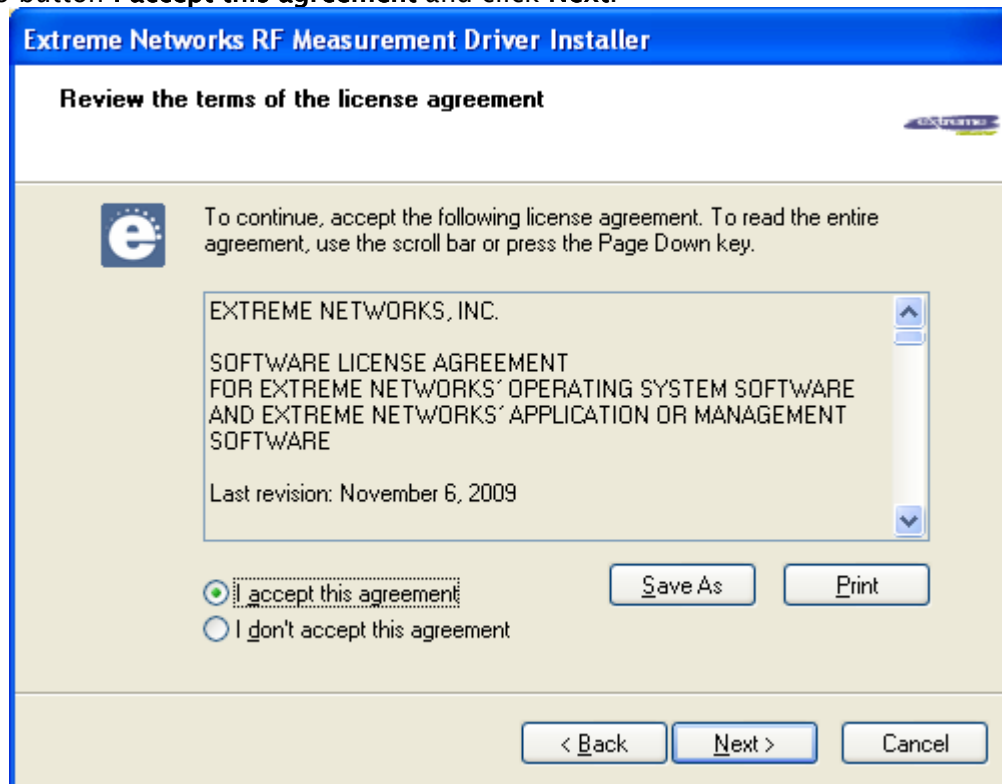


Step 3: Run the DriverSetup.exe installer located in "Help\WLAN Drivers" located within your installation directory.

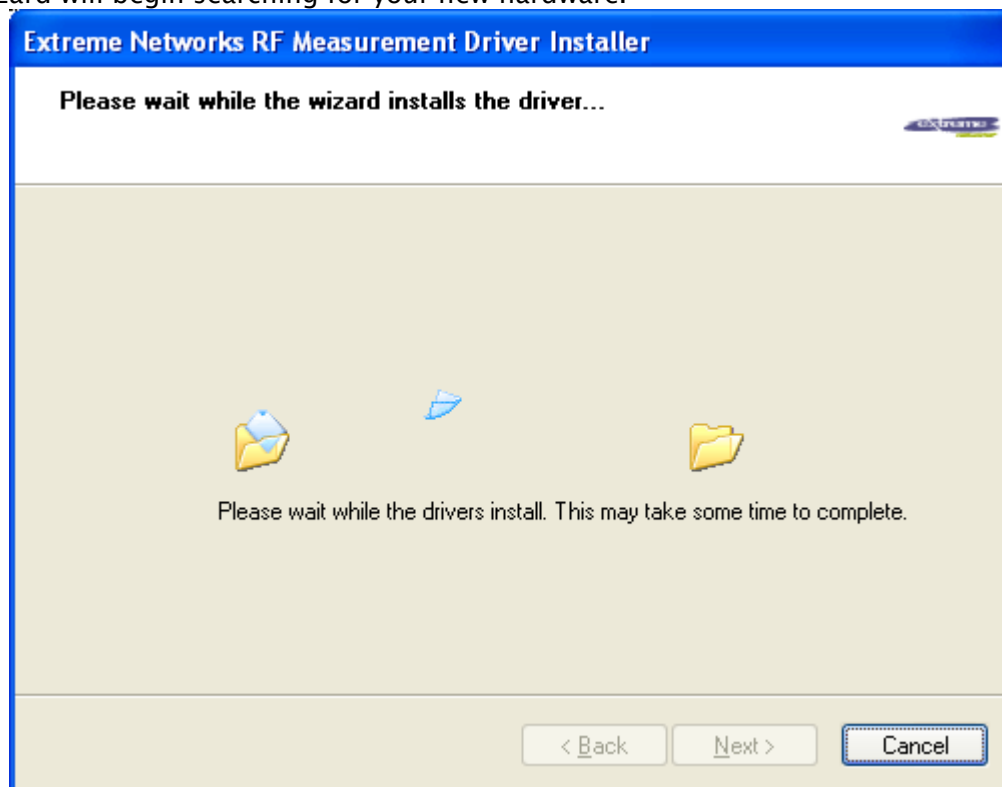
Step 4. Click **Next** to begin the driver installation process.



Step 5. You must accept the license agreement before installing the driver. If you accept the agreement, check the radio button **I accept this agreement** and click **Next**.



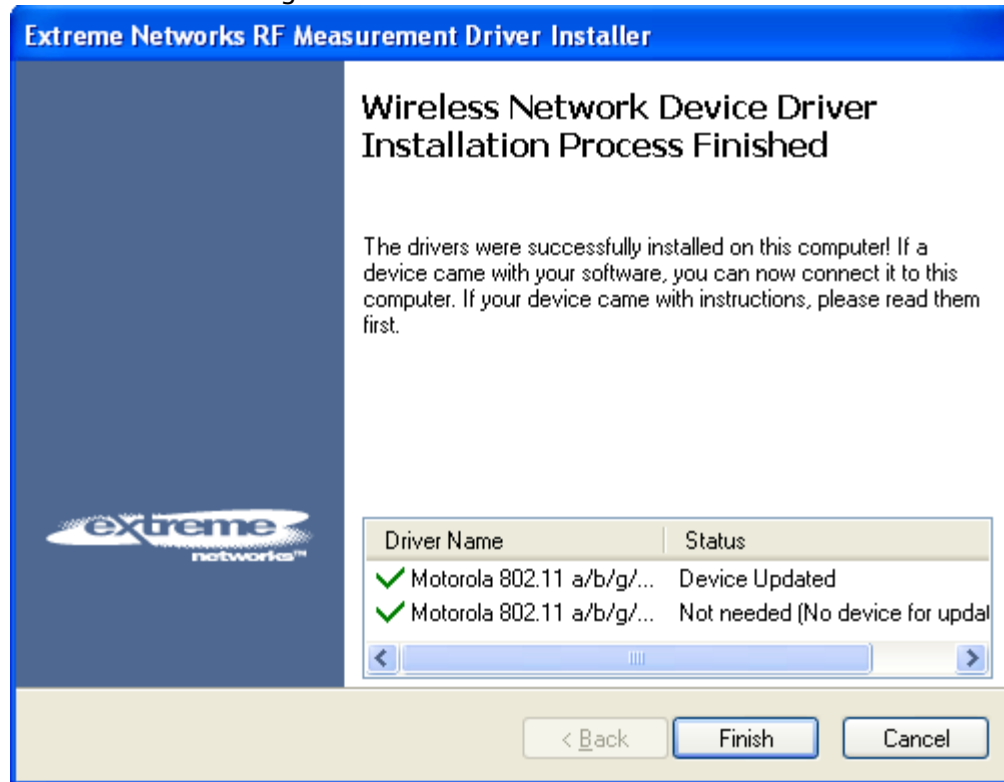
Step 6. The wizard will begin searching for your new hardware.



If you receive a warning message saying that the software you are installing has not passed Windows Logo testing, click **Continue Anyway**



Step 7. If the dialog indicates your hardware is ready to use, the installation was successful and the card is now ready for use with RF Monitoring mode measurements.



If you encounter an error please contact Extreme Networks wireless software support team at support@extremenetworks.com.

License activation

To obtain the Summit WMScanner software license key:

1. Note the Summit WMScanner Serial/Voucher Number for the software. Summit WMScanner software is part of Extreme Networks Wireless Management Suite (WMS) software. It uses the same Serial/Voucher Number as the WMS. The WMS Serial/Voucher Number can be found on the product label located on the outside flap of the WMS CD sleeve.
2. Note the MAC address of the PC on which this software would be installed.
3. Navigate to the Extreme Networks License Server website at: www.extremenetworks.com/extreme/upgrade.htm
4. Select the license for Summit WMScanner.
5. Follow the instructions provided to generate and activate the license key.

Note: If you have not already registered this product with Extreme Networks, you can register on the Extreme Networks website at: <http://www.extremenetworks.com/go/productregistration>.

Introduction to Using Summit WMScanner

Now that you have installed the software, you can begin measuring and visualizing your WiFi network's performance. This Quick Start Guide provides a brief tutorial on using the software to perform a site survey of your facility and then analyze your WiFi network through various visualization modes. The following instructions provide a recommended workflow for doing site surveys and analysis using Summit WMScanner. For additional information about how to use Summit WMScanner, please refer to the online User Manual (**Help menu > User Manual**).

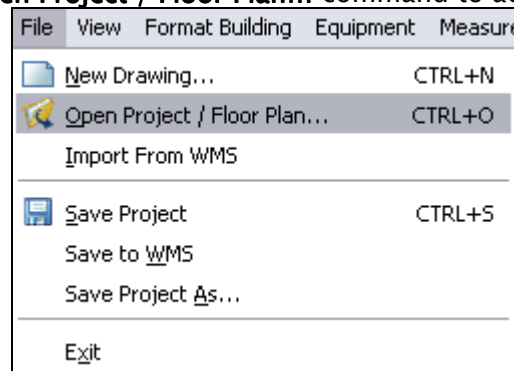
Requirements

Before proceeding with the site survey, you must first acquire a floor plan of the facility. In order to import the floor plan into Summit WMScanner, the floor plan needs to be in the following formats:

- Raster images (*.BMP, *.JPG, *.TIFF formats)
- Raw facility CAD files (*.DWG and *.DXF formats)
- Formatted facility drawing files (files that were created in Motorola EnterprisePlanner™ or LANPlanner®)

Loading Raster Images, Raw CAD files, or Formatted Drawing Files

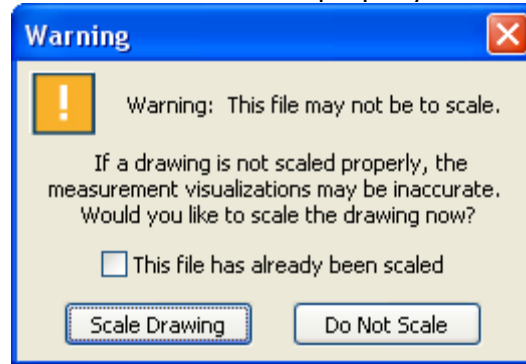
Step 1: Select the **File** menu > **Open Project / Floor Plan...** command to access the **Open Drawing** dialog.



Step 2: When the **Open Drawing dialog** opens, browse to your floor plan's file and click **Open**. You will be asked whether you wish to save changes for the current drawing file. Click **No**.

Step 3: A **Warning** dialog will pop up asking you whether the file you have opened is scaled or not. If you opened a raster image or a raw CAD drawing file, you will need to scale the drawing file. When performing a site survey, it is extremely important to use a scaled drawing file. Click **Scale Drawing** and follow the onscreen instructions. You will be asked to select two points on the floor plan for which you know the distance and then enter the distance. If you opened a formatted drawing file created in EnterprisePlanner or LANPlanner, most likely it has already been scaled. If this is the case, check the box next to the **This file**

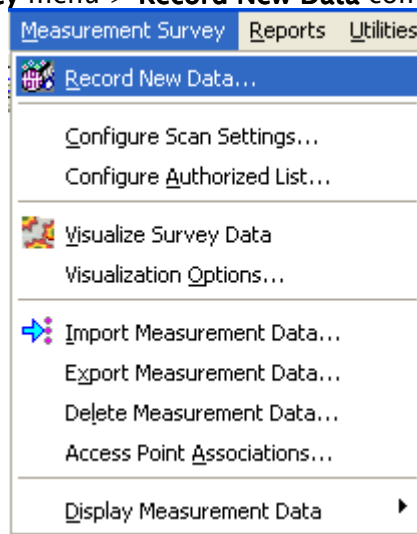
has already been scaled option and then click **Do Not Scale**. **Note:** You can still choose to scale the formatted drawing file in order to ensure that it is scaled properly.



Step 4: You should now see your facility in the main drawing window. You are now ready to perform a site survey.

Performing a Site Survey

Step 1: Select the **Measurement Survey** menu > **Record New Data** command to begin taking measurements.



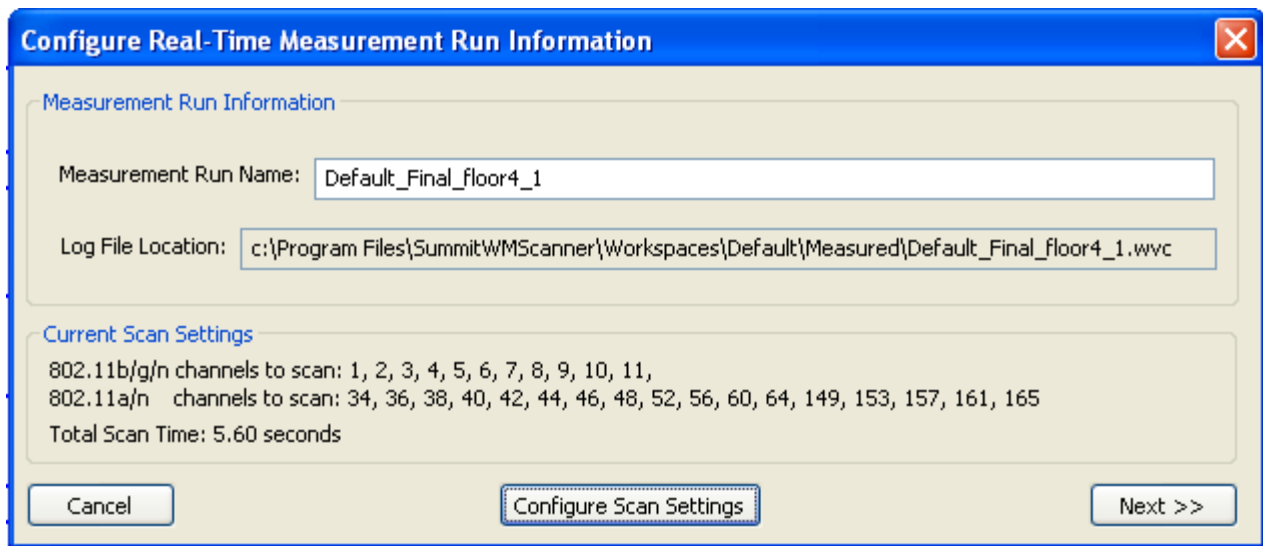
Step 2: In the **Configure Real Time Measurement Run Information** window, there are several options available. You can change the Measurement Run name, the location where the measurement run log file is saved, mobile receiver height, and marker color. Ensure that the **WLAN Device** option is selected from the **Select Measurement Mode** drop down menu before clicking **Next**.

The screenshot shows the 'Configure Real-Time Measurement Run Information' dialog box. It has a blue title bar with a close button. The main area is divided into several sections: 'Measurement Run Information' with fields for 'Workspace' (c:\Program Files\Summit\WMSscanner\Workspaces\Default\), 'Description' (Default_Final_floor4_1), 'Building Notes', and 'Create UTF-8 Log File' (c:\Program Files\Summit\WMSscanner\Workspaces\Default) with a 'Browse...' button; 'Receiver Height Above Floor' with a numeric field (3.00) and a unit dropdown (feet); 'Marker Color' with a red color selection box; and 'Select Measurement Mode' with a dropdown menu showing 'WLAN Device' and a 'Setup Instructions' button. At the bottom are 'Cancel' and 'Next >>' buttons.

Step 3: Select **RF Monitoring** in the **Measurement Options** window and click **Next**.

The screenshot shows the 'Measurement Options' dialog box. It has a blue title bar. The main area is divided into two sections: 'Select Client Mode' with two radio button options: 'RF Monitoring' (selected) with the description 'Collect RF data from all APs in range (special adapter required)' and 'AP Performance' with the description 'Connect to a single AP for RF or network performance measurements'; and 'Select Server Mode' with one radio button option: 'Server' with the description 'Create a server for AP Performance clients'. At the bottom are '<<Back' and 'Next>>' buttons.

Step 4: In the **Configure Real Time Measurement Run Information** window, there are several options available. You can change the Measurement Run name, the location where the measurement run log file is saved, and what standards and channels to scan for.



The screenshot shows a Windows-style dialog box titled "Configure Real-Time Measurement Run Information". It has a blue title bar with a close button (X) in the top right corner. The dialog is divided into two main sections. The first section, "Measurement Run Information", contains two text input fields: "Measurement Run Name:" with the value "Default_Final_floor4_1" and "Log File Location:" with the value "c:\Program Files\SummitWMScanner\Workspaces\Default\Measured\Default_Final_floor4_1.wvc". The second section, "Current Scan Settings", displays the following text: "802.11b/g/n channels to scan: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11," followed by "802.11a/n channels to scan: 34, 36, 38, 40, 42, 44, 46, 48, 52, 56, 60, 64, 149, 153, 157, 161, 165" and "Total Scan Time: 5.60 seconds". At the bottom of the dialog, there are three buttons: "Cancel", "Configure Scan Settings" (which is highlighted with a dashed border), and "Next >>".

Step 5: The default survey option is to scan channels 1–11 on the 2.4 GHz band and channels 34–64, 149–165 on the 5 GHz band. If you need to change the default scan settings, click the **Configure Scan Settings** button. In the **Configure Scan Settings** window, select the channels you wish to scan and make any desired changes to dwell times. Click **OK** and then click **Next** on the **Configure Real Time Measurement Run Information**.

Note: We suggest that users select a dwell time of at least 150 ms for all channels scanned.

Configure Scan Settings

Select which channels to scan and how long to dwell on each channel.

802.11 B/G/N Channels			802.11 A/N Channels		
Dwell Time (ms)	Extension		Dwell Time (ms)	Extension	
1 <input checked="" type="checkbox"/> 150	0		8 <input checked="" type="checkbox"/> 150	0	
2 <input checked="" type="checkbox"/> 150	0		9 <input checked="" type="checkbox"/> 150	0	
3 <input checked="" type="checkbox"/> 150	0		10 <input checked="" type="checkbox"/> 150	0	
4 <input checked="" type="checkbox"/> 150	0		11 <input checked="" type="checkbox"/> 150	0	
5 <input checked="" type="checkbox"/> 150	0		12 <input type="checkbox"/> 200	0	
6 <input checked="" type="checkbox"/> 150	0		13 <input type="checkbox"/> 200	0	
7 <input checked="" type="checkbox"/> 150	0		14 <input type="checkbox"/> 200		
			34 <input checked="" type="checkbox"/> 150		
			36 <input checked="" type="checkbox"/> 150	0	
			38 <input checked="" type="checkbox"/> 150		
			40 <input checked="" type="checkbox"/> 150	0	
			42 <input checked="" type="checkbox"/> 150		
			44 <input checked="" type="checkbox"/> 150	0	
			46 <input checked="" type="checkbox"/> 150		
			48 <input checked="" type="checkbox"/> 150	0	
			52 <input checked="" type="checkbox"/> 150		
			56 <input checked="" type="checkbox"/> 150	0	
			60 <input checked="" type="checkbox"/> 150		
			64 <input checked="" type="checkbox"/> 150	0	
			149 <input checked="" type="checkbox"/> 150		
			153 <input checked="" type="checkbox"/> 150	0	
			157 <input checked="" type="checkbox"/> 150		
			161 <input checked="" type="checkbox"/> 150	0	
			165 <input type="checkbox"/> 200	0	

Channel Width Settings

Channel Width: 20 MHz

Advanced

Select All Deselect All

Receiver Height Above Floor

3.0 feet

Channel Width Settings

Channel Width: 20 MHz

Advanced

Select All Deselect All

Apply the following dwell time to all selected channels

Uniform Dwell Time: 200 ms

Update All

Cancel OK

Step 6: Select the desired WLAN adapter to perform the site survey. If no adapter is listed ensure you have installed the custom driver or contact Extreme Networks wireless software support team at support@extremenetworks.com.

Select WLAN Adapter

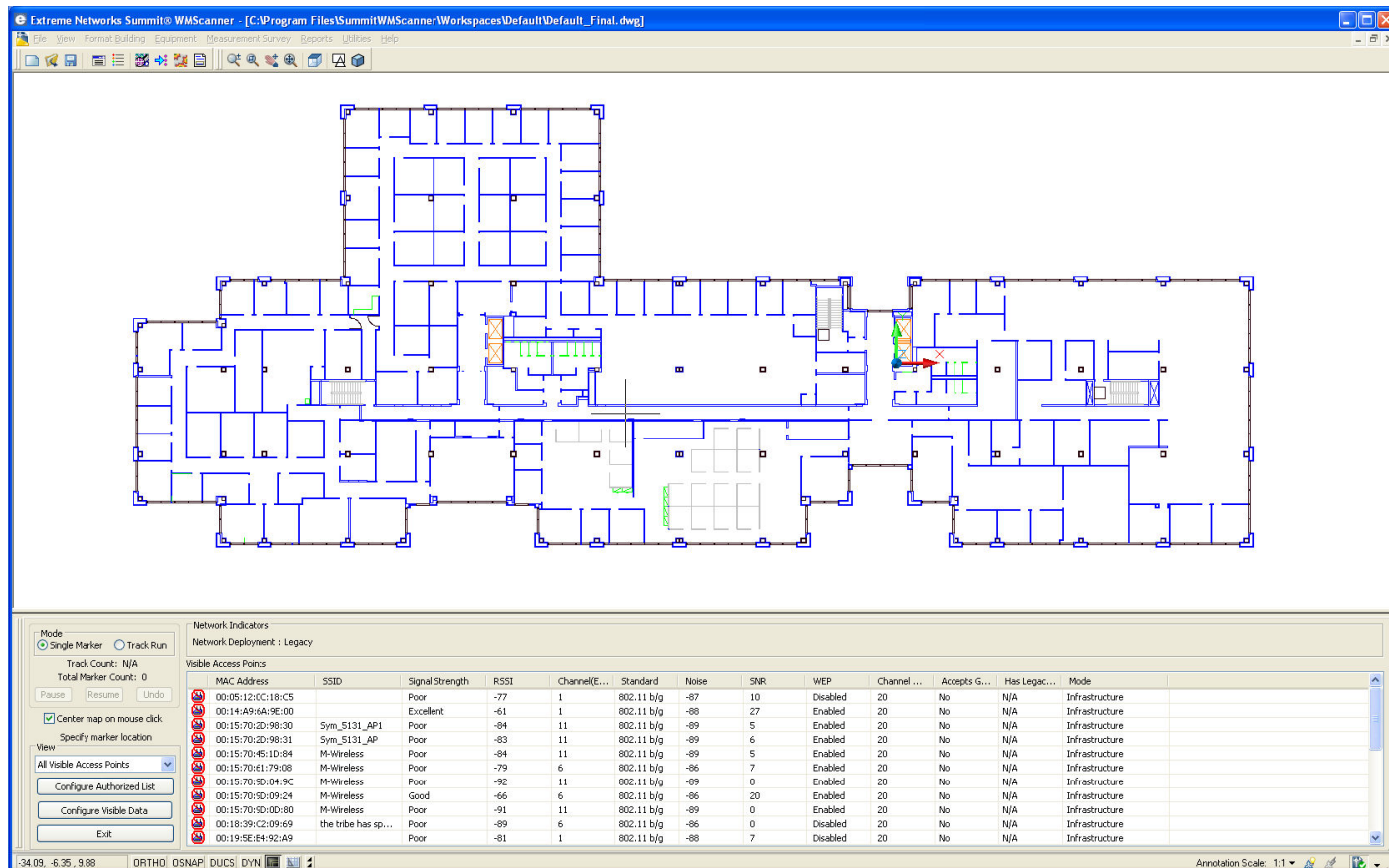
Choose your WLAN adapter.

Motorola (Netgear WAG511) 802.11 Measurements Adapter

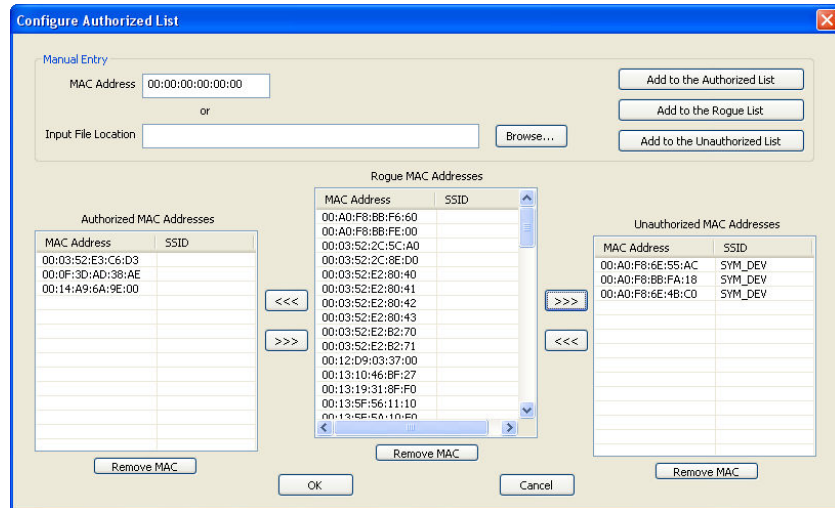
OK Cancel

Step 7: A panel should now appear towards the bottom of the drawing window. If there are any APs in the vicinity, the list under the **Visible Access Points** section will start populating. It is recommended that you let the **Visible Access Points** list refresh at least 5 times before proceeding (this can be seen by periodic updates to the **Visible Access Points** list).

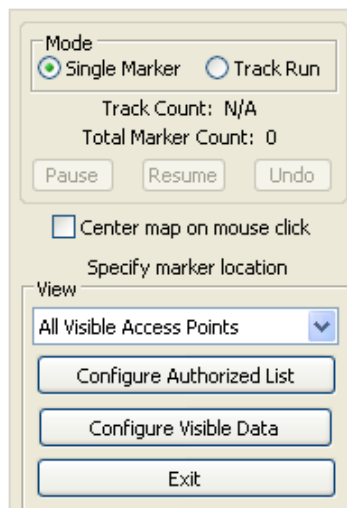
Note: If the **Visible Access Points** list does not populate and you are certain that there are active APs nearby, click the **Exit** button. You need to ensure that you are not associated to an AP under the Windows Wireless Network Connections. Also, if the laptop used to perform the site survey has an active internal wireless card, try disabling the internal card and then proceed with using Summit WMScanner.





Step 8: After the list has been populated, you now have the option to specify which APs are authorized, unauthorized, or rogues. Authorized APs are APs that are part of your network. Unauthorized APs are APs that you are aware of but are not part of your network (i.e. APs that are part of a neighboring office network). APs classified as rogues are those APs that do not belong in the environment and should not be present. Now click on the **Configure Authorized List** button. In the **Configure Authorized List** dialog window, you will see that all the MAC addresses for visible APs will initially be under the **Rogue MAC Address** section. Select the authorized MAC addresses that are part of your network and click the '<<<' button to populate them under the **Authorized MAC Addresses**. Repeat this for the unauthorized MAC addresses and then click **OK**. Users can also load a text file list of authorized MAC addresses into Summit WMScanner. The text file needs to have one MAC address per line with the following format for the address: "XX:XX:XX:XX:XX:XX".



Step 9: You can begin taking measurements by clicking on points on the map that correspond to your current location. There are two options for recording data under the **Mode** section. **Single Marker** mode records a single measurement point on the drawing file when you left click a point on the map. **Track Run** mode records multiple points along a straight line which are collected and plotted between your start and end point clicks. Track runs are continuously drawn unless you switch back to **Single Marker** mode. If you wish to delete a measurement, click on the **Undo** button. For further explanations of these two modes, please refer to **Taking Measurements** in **Chapter 3 – Measurement Surveys** in the [Summit WMScanner User Manual](#).

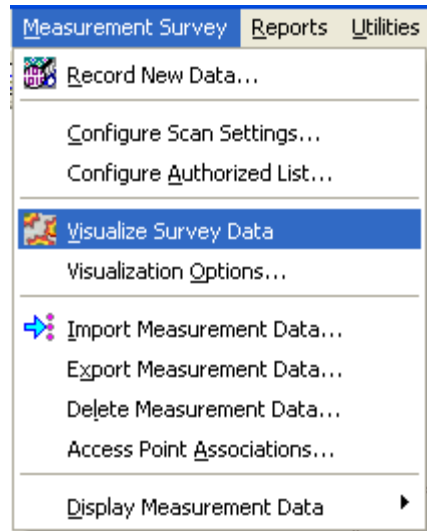


Step 10: If you find that you are zoomed too far in or out, click on the  icon. Left click and hold the mouse button while the cursor is in the drawing window and move the mouse up or down in order to zoom in or out. When you are done, right click in the drawing window and go to **Exit**. To pan the drawing file so that you can take a measurement in a certain location of the map, click on the  icon. Left click and hold the mouse button with the cursor in the drawing window. Move the mouse in the direction you wish to pan to. To exit **Pan** mode, right click in the drawing window and choose **Exit**.

Step 8: When you are done taking measurements, click the **Exit** button.

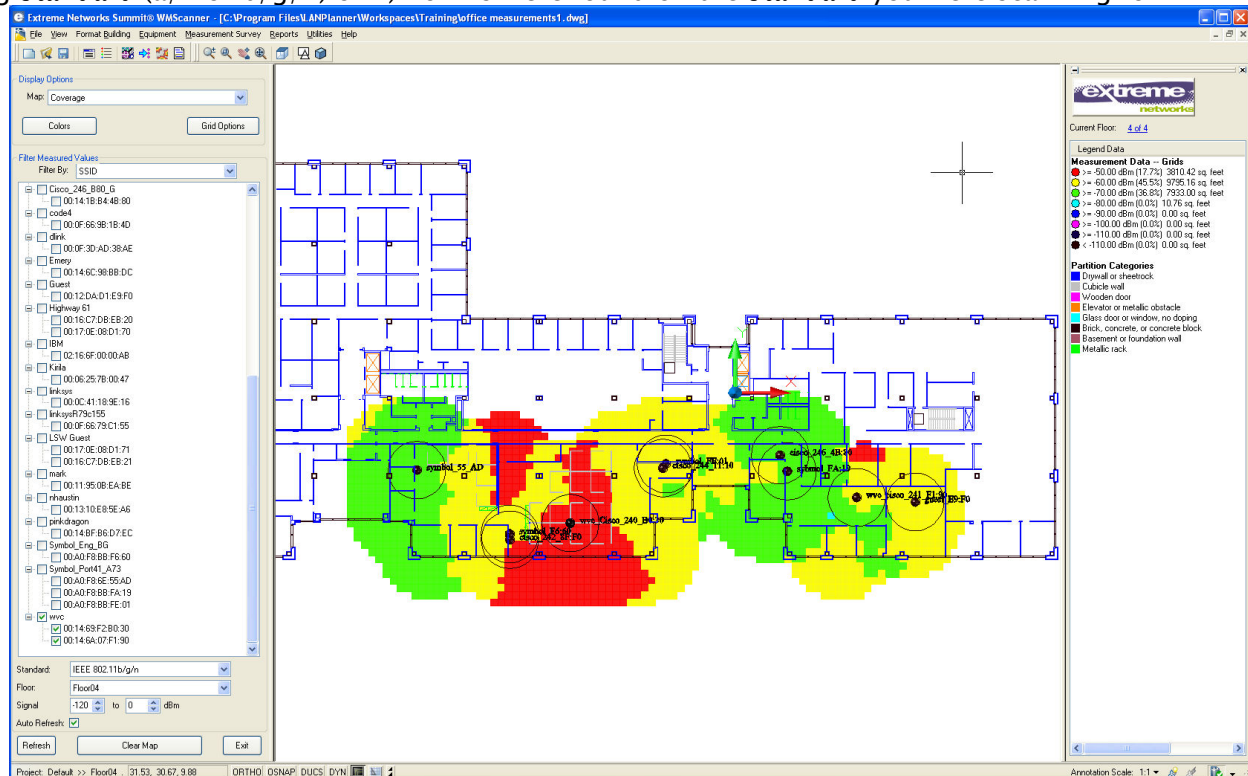
Visualizing Your Measurement Data

Step 1: Select the **Measurement Survey** menu > **Visualize Survey Data** to bring up the heat map visualizations. If a **Warning** dialog box pops up, click **OK** and proceed. The **Display Options** window pane will appear to the left of the drawing window.

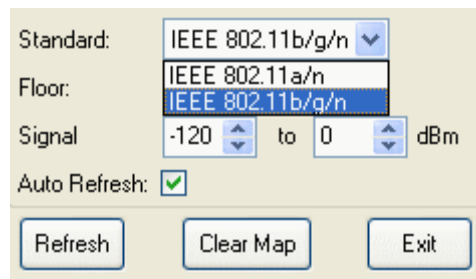


Step 2: You should now see a heat map being displayed in the drawing window. To change the type of heat map being displayed, click on the pull down menu next to **Map** and choose from the list. For an explanation of what the different heat map visualizations mean, please refer to **Visualizing Survey Data** in **Chapter 3 – Measurement Surveys** in the **Summit WMSanner User Manual**.

Note: If the Heat maps do not appear, the two possible reasons are 1) you are trying to visualize for the wrong **Standard** (a/n or b/g/n) or 2) no APs were found on the **Standard** you were scanning for.



Step 3: If you took measurements on the 802.11a/n standard in addition to 802.11b/g/n, click on the pull down tab next to **Standard** and select **802.11a/n**. The Heat map visualizations for the 802.11a/n standard should now appear.



The screenshot shows a 'Display Options' window with the following settings:

- Standard:** A dropdown menu currently showing 'IEEE 802.11b/g/n'.
- Floor:** A dropdown menu showing 'IEEE 802.11a/n'.
- Signal:** A range selector set from '-120' to '0' dBm, with up and down arrows for adjustment.
- Auto Refresh:** A checked checkbox.
- Buttons:** 'Refresh', 'Clear Map', and 'Exit' buttons at the bottom.

Step 4: Click **Exit** to close the **Display Options** window pane.

Customer Support

NOTE

Services can be purchased from Extreme Networks or through one of its channel partners. If you are an end-user who has purchased service through an Extreme Networks channel partner, please contact your partner first for support.

Extreme Networks Technical Assistance Centers (TAC) provide 24x7x365 worldwide coverage. These centers are the focal point of contact for post-sales technical and network-related questions or issues. TAC will create a Service Request (SR) number and manage all aspects of the SR until it is resolved. For a complete guide to customer support, see the Technical Assistance Center User Guide at:

<http://www.extremenetworks.com/go/TACUserGuide>

The Extreme Networks eSupport website provides the latest information on Extreme Networks products, including the latest Release Notes, troubleshooting, downloadable updates or patches as appropriate, and other useful information and resources. Directions for contacting the Extreme Networks Technical Assistance Centers are also available from the eSupport website at:

<https://esupport.extremenetworks.com>

Documentation

Check for the latest versions of documentation on the Extreme Networks documentation website at:

<http://www.extremenetworks.com/go/documentation>

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